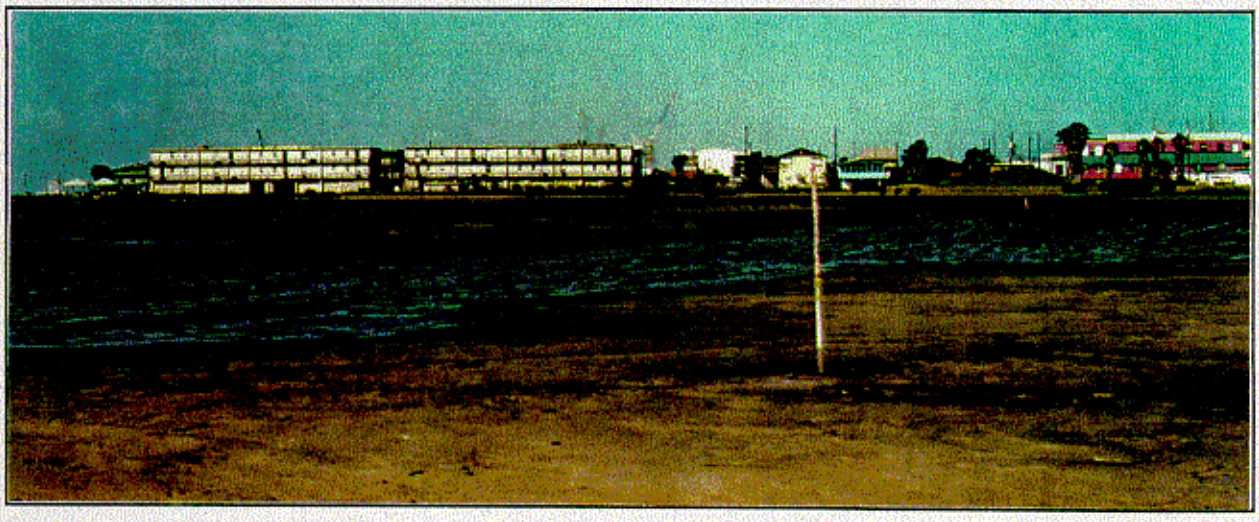
Texas Center for Policy Studies

# A NEW INTERPRETATION OF "NO NET LOSS"

***The piecemeal approach to wetlands destruction***

*Review of U.S. Army Corps of Engineers actions on South Padre Island, Cameron County, Texas*

This paper provides an overview of the detrimental effects some development is having on valuable coastal wetlands habitat on South Padre Island and the Lower Laguna Madre in Cameron County, Texas. The Corps of Engineers is the agency responsible for issuing permits for construction and development work in wetlands and waters of the United States. The agency holds this authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Over the years, the Corps has allowed developers and the regulated community to, quite simply, destroy valuable wetlands on the island in a piecemeal fashion. Recent Corps field office expansion has helped foster better coordination between Corps personnel and state and federal resource agency personnel, at least during the permit review process. However, the problem continues. The effectiveness of the Corps field office in stopping wetlands destruction is hampered by Corps authority at the regional level, and there is still a great need for improvement.



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*The photos on the title page and pp. 4, 8, 14, 16, and 23 were obtained from the Texas Parks and Wildlife Department under an open records request for information.*

*The views expressed in this report are our own and do not necessarily reflect the views of these agencies or our funders.*

## *Introduction: a problematic history*

**"The degree to which coastal barrier wetlands receive protection by the review of Section 404 and Section 10 permit applications varies. A narrow interpretation of jurisdictional boundaries, the cumulative effects of many small projects, and loopholes in permit requirements have all contributed to a limited effectiveness of these laws in protecting coastal barrier wetlands and resources."**

- *Restless Ribbons of Sand, Atlantic and Gulf Coastal Barriers; Wells and Peterson, Institute of Marine Sciences, University of North Carolina at Chapel Hill*

National concern for the preservation of wetlands and increased awareness about the important role they play in all our lives has, in the past few years, focused attention on the agency responsible for overseeing development affecting the waters and wetlands of the nation - the U.S. Army Corps of Engineers.

This report specifically examines patterns exhibited by the U.S. Army Corps of Engineers (Corps) in issuing permits for projects along the Lower Laguna Madre in the town of South Padre Island, Cameron County, Texas. Unless otherwise indicated, the "Corps" mentioned throughout this report refers to the Corps district office located in Galveston, Texas.

There is mounting concern among environmental organizations and agencies responsible for protecting the fish and wildlife resources of the state of Texas that the way in which the Corps interprets the regulatory guidelines it is charged with enforcing is actually leading to the destruction of valuable wetlands, little by little, with no accounting of the cumulative impacts.

The value of wetlands in improving water quality, providing important wildlife habitat and ensuring protection from floods is well-known. The Corps is directed to protect and/or mitigate for the loss of wetlands within its jurisdiction and coordinate with other state and federal natural resource agencies during the permit review process. This report will show, however, that while the Corps has consulted with other agencies, the agencies' recommendations go largely ignored and development proceeds despite agency concerns that valuable habitat will be impacted. This piecemeal destruction of valuable wetlands and endangered species habitat is what agencies refer to as "cumulative impacts".

The Texas Parks & Wildlife Department is one of several state and federal resource agencies which provide comments to the Corps during the permit review process. TPWD has, on many occasions, expressed concern to the Corps over the cumulative impacts which are occurring on South Padre Island as a result of both regulated and unregulated activities. [1]

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[1] Case # I-3356: letter dated December 19, 1996

Certain pile-supported structures, such as decks and houses, are not regulated by the Corps even if they are constructed in areas which are described in the Section 404 program. On South Padre Island, Section 404 areas include the majority of the black mangrove marshes, other vegetated marshes, and much of the unvegetated sand, mud and algal flats.

Resource agencies have shown concern that habitat functions of these areas are greatly diminished once structures are erected over them. Some developers have tried to extend this non-regulated pile-supported structure definition to include stores, gas stations, shopping malls, restaurants and other commercial

development in order to circumvent the Corps permitting process.

Official comments from the U.S. Fish & Wildlife Service echo this concern. "The Service believes that the Galveston District's interpretation of the national policy governing regulation of pile-supported structures as fills in accordance with Section 404 of the Clean Water Act...may have resulted in substantial and unaceptable impacts to aquatic resources of national importance."[2]

The Corps' own guidelines under General Policies for evaluating permit applications in the Code of Federal Regulations[3] state: "Although a particular alteration of a wetland may constitute a minor change, the cumulative effect of numerous piecemeal changes can result in a major impairment of wetland resources. Thus, the particular wetland site for which an application is made will be evaluated with the recognition that it may be part of a complete and interrelated wetland area." The Corps Galveston District has yet to do a full accounting of the impacts on wetlands and habitat associated with previous construction it has permitted on South Padre Island.

Another process the Corps frequently employs in this region is the "after-the-fact" permit, a particularly onerous but legal mechanism which allows a project to be permitted after a wetland has been filled, pilings placed, and construction begun or completed. The after-the-fact permit is a particularly useful tool for those wishing to circumvent the pre-construction permit process: the violator can claim ignorance of legal requirements and many times escape punitive action. Even in those cases where mitigation is required, a cumulative loss still occurs because there is not restoration of the damaged resources - once it is destroyed, it is not replaced. This abuse of the system is only encouraged

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[2] Case # I-3356: letter dated December 12, 1996
[3] 33 CFR §320.4 (b)(3)

when after-the-fact permits are issued no matter how drastic the violation. The Corps Galveston District did not levy a fine on any violator in the cases reviewed for this report.

These problems are not limited to South Padre Island. The Galveston Bay Conservation and Preservation Association (GBCPA) recently sued the Galveston district over the Marina del Oro project in Chambers County.[4] GBCPA's complaint in this case was that the Corps reissued a permit for a large development involving canal construction and channel dredging without filing a public notice, "even though the developer had announced that the project had been significantly enlarged."[5]

Founding chair of the Galveston Bay Foundation, Jim Blackburn, has also registered concerns over the Corps permitting practices. In a 1996 letter to the district chief of the Regulatory Branch, Blackburn states: "Something is wrong with the regulatory functions program of the Galveston District..." Blackburn cites nine different cases in the Houston-Galveston region where numerous citizen groups had litigation pending against the Corps and had requested and been denied public hearings and an opportunity to voice their concerns over permits that would harm local wetlands.

While Blackburn notes there are some positive programs generated by the Corps within the Galveston District, such as the Beneficial Uses Group associated with the Houston Ship Channel dredging, and a Safe Harbor project in Corpus Christi, he says the problem is that "leadership, guidance and conviction are lacking in the regulatory functions branch to help the staff through the difficult political terrain" and that special interests "intimidate the Galveston District into making bad decisions that hurt the Texas Coast."

Problems have also been documented in other Corps district offices elsewhere in the country. Public Employees for Environmental Responsibility (PEER), based in Washington, D.C. produced a white paper in January of 1997 describing similar lack of enforcement by the Corps in the Florida Keys - current and former Corps employees operating in the Jacksonville District of the Keys helped prepare the paper. The report documents that in calendar year 1995 the district handled 92 permits for work in navigable waterways. Of those 92 cases, only one permit application was denied, and only because the applicant lacked a state permit.

The PEER report also describes a number of cases in which the Corps failed to punish violators, ignored unauthorized wetland fill projects (or issued an after-the-fact permit with no punitive action imposed on the violator), did not effectively monitor prescribed mitigation, and by ignoring cumulative impacts, allowed urban development to proceed, lot by lot, within wetlands.

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[4]"Texas Coastal Activism and Litigation" - Blackburn, 98
[5]Ibid.

## I. Value of coastal wetlands

Wetlands are periodically inundated areas with water-tolerant plants and poorly drained soils. They mark a transition zone between well-drained upland areas and permanently flooded habitats. Coastal wetlands are typically associated with estuaries - the confluence of freshwater rivers and streams where they drain into the ocean. The definition of coastal wetlands includes "fresh, intermediate, and brackish marshes, salt marshes, and swamps."[6]

There are many benefits associated with wetlands - please see the attached graphic "Functions and Values"[7], for a general description of those benefits.

Resource agencies estimate that in the past 200 years, Texas has lost 52% of all its original wetland resources, and 63% of wetland-associated riparian and bottomland vegetation. Since 1955, the state has lost 30,442 acres of estuarine wetlands[8], similar to the types found on South Padre Island.

These losses are not all due to development, but human activities are responsible for the majority of these losses. Please refer to the attached sheet describing causes of coastal wetland loss.[9]

The Laguna Madre and barrier island ecosystem is highly sensitive, diverse and important for many reasons. The Laguna Madre is a long, hypersaline bay extending from Corpus Christi to Brownsville. It is enclosed by the mainland to the west and the barrier island of South Padre on the east. Though it is hypersaline, the Laguna receives small amounts of freshwater inflow from tributaries such as the Arroyo Colorado in Harlingen and infrequent heavy rainfall.

Paradoxically, despite its hypersalinity, the Laguna is a thriving and productive ecosystem. Even with limited freshwater input - normally an essential element for estuary productivity - the Laguna "sustains half of Texas coastal finfish catches and 80% of its seagrasses - despite being only 20% of its estuarine system".[10] Biologists attribute the lagoon's productivity to seagrass beds which thrive in the lagoon, providing nursery grounds and foraging habitat for many species of aquatic organisms such as fish and shellfish. The Laguna Madre also provides important habitat for wading birds, shorebirds and waterfowl. Mudflats on the bayside of South Padre Island also provide algae, aquatic organisms and nutrients to the lagoon ecosystem.

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[6] Texas Coastal Wetlands, A Handbook for Local Governments, Texas General Land Office, March 1997

[7] Courtesy Tx General Land Office

[8] See footnote #6

[9] See footnote #7

[10] Audubon March-April 98

**Figure 1**

# Functions & Values

Wetland functions are the physical, chemical, and biological processes or features of a wetland. Wetland values are the relative worth, usefulness, or importance of wetland functions to society. While wetland "function" and "value" are not synonymous, they are of equal significance.

| FUNCTIONS | VALUES |
|---|---|
| **Processes** | |
| Retain sediment/toxicants | Improved water quality |
| Remove/transform nutrients | Improved water quality |
| Recharge/discharge groundwater | Water supply |
| Stabilize and protect shorelines | Erosion control |
| Alter/store flood water | Flood control and prevention |
| **Features** | |
| Wildlife | Commercial fishing/hunting<br>Recreation<br>Research/education<br>Aesthetics |
| Vegetation<br>Soil<br>Hydrology | Agriculture<br>Timber/forestry<br>Wildlife habitat<br>Research/education<br>Recreation<br>Aesthetics<br>Energy resources |

Coastal wetlands have tremendous biologic and economic values. Texas wetlands serve as nursery grounds for over 95 percent of the recreational and commercial fish species found in the Gulf of Mexico; they provide breeding, nesting, and feeding grounds for more than one third of all threatened and endangered animal species and support many endangered plant species; and they provide permanent and seasonal habitat for a great variety of wildlife, including 75 percent of North America's bird species.

Coastal wetlands perform many chemical and physical functions. Wetlands temporarily retain pollutants such as suspended sediments, excess nutrients, toxic chemicals, and disease-causing microorganisms. They filter nitrates and phosphates from rivers and streams that receive wastewater effluents. Other pollutants trapped in wetland sediments can be converted by biochemical processes to less harmful forms, buried, or taken up by wetland plants. Wetlands reduce erosion by absorbing and dissipating wave energy, binding and stabilizing sediments, and increasing sediment deposition. Primarily because of their topography or position in the landscape, wetlands can capture and retain surface-water runoff during periods of flooding. They also promote groundwater recharge by diverting, slowing, and storing surface water, thus allowing infiltration and percolation of water into the aquifer.

**Figure 2**

# Coastal Wetland Loss

Texas had roughly 16 million acres of wetlands in the 1800's. Since then, the state has lost slightly more than half of its original wetlands. Coastal wetlands, which account for approximately one-fifth of the total remaining wetland acreage, have experienced a 35 percent loss since the 1950's. The Galveston Bay system alone has lost 33,400 acres of wetlands, and wetland loss in the river deltas amounts to some 21,000 acres.

Wetland loss results from both human activities and natural processes.

## Human Activities

**Dredging/channelization**
- navigation channels
- flood protection
- residential development
- reservoir maintenance

**Filling**
- dredge spoil disposal
- solid waste disposal
- road/highway construction
- residential development
- commercial development
- industrial development

**Drainage**
- agriculture
- timber production
- rangeland
- mosquito control

**Extraction**
- minerals
- groundwater
- oil and gas

**Construction**
- dikes
- dams
- levees
- seawalls

**Discharges**
- pollutants
- sediments

## Natural Processes

- Sea level rise
- Droughts
- Erosion
- Biotic effects
- Hurricanes and storms

## The Laguna Madre is an important resource for humans and wildlife

There are different types of wetland habitat on South Padre Island:

- intertidal estuaries with emergent vegetation such as mangrove (*Avicennia germinans*) and sea ox-eye (*Boricchia frutescens*)
- unvegetated algal, sand and mud flats that are periodically inundated and which support numerous species of shorebirds.
- marshes dominated by salt-tolerant vegetation like *Spartina alterniflora*, a species of grass, and glasswort (*Salicornia*).

• An estimated 10 to 20% of the world's population of threatened piping plovers forage and roost on unvegetated mud, sand and wind tidal flats in the Laguna Madre and South Padre Island region.

• Washover passes and tidally-influenced wetlands on the island contribute periodic flows to the Laguna Madre. These washover passes, along with the broad wind tidal flats, provide habitat for huge flocks of roosting and foraging shorebirds.

• As mentioned, the Laguna Madre's hypersaline lagoon system harbors highly productive seagrass meadows. Three species dominate in the Lower Laguna: shoalgrass (*Halodule wrightii*), manateegrass (*Syringodium filiforme*) and turtlegrass (*Thalassia testudinum*). These seagrasses sustain both the shrimp harvest - valued at $50 million annually for Texas, and recreational and commercial fishing, estimated to bring revenues of $238 million.

• Black mangrove wetlands, or tidal sloughs dominated by black mangrove, support relatively high species diversity; their root systems contain epiphytic plants which contribute to the carbon pool - a source of energy for aquatic organisms. Additionally, mangrove marshes provide essential nutrients to the Laguna Madre ecosystem in the form of detritus. Decaying biological matter from emergent vegetation is an extremely important component of the food chain. Commercially important species such as shrimp, blue crab, spotted seatrout, red drum, and flounder depend upon a healthy ecosystem for their survival.

• 80% of the world population of redhead ducks - a popular game species - overwinter and forage almost exclusively on *Halodule wrightii* in the southern Laguna Madre of Texas and northern portion in Tamaulipas. While it is still considered a highly productive ecosystem, there are indications that the human impacts of development and construction in general have caused a gradual shift in the presence of certain components of the system. Studies suggest that over a 20-year period, *Halodule*-- seagrass beds have decreased by over 60% in the Lower Laguna Madre.[11] Scientists speculate that freshwater exchange in the lagoon has increased as a result of human activity, promoting growth of other seagrasses over the traditionally-dominant *Halodule*.

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[11]Christopher Onuf, Bulletin of Marine Science, 58(2): 404-420, 1996

Mangrove wetland on South Padre Island

## *II. Agency Jurisdiction & Regulatory Framework*

Virtually every agency charged with monitoring and enforcing the protection of marine and land-based wildlife species agrees that development in sensitive areas such as coastal wetlands has great potential to harm wildlife habitat and water quality and impact recreationally and commercially important species. Table 1 shows those federal and state resource agencies which provide comments to the Corps during the review of permit applications, as well as their acronyms and area of responsibility. These agencies will be referred to by acronym throughout this paper.

Before issuing an individual Section 404 and/or Section 10 permit, the Corps will post a 30-day Public Notice, which is distributed to the resource agencies and other interested individuals, requesting comments on the proposed project. Under the Fish and Wildlife Coordination Act, the Corps is required to obtain comments from the resource agencies regarding potential impacts to fish and wildlife resources that may result from the proposed project. Concerns from these agencies regarding a proposed project are to be raised during this time. Often, an agency will recommend that a project plan be modified to avoid or minimize impacts that the construction might have. Sometimes an agency will recommend denial of the permit based on the potential effects on threatened and endangered species, water quality or wetland habitats. The comment period is also used to gauge overall public interest in the project and to determine whether more extensive review or a public hearing is in order.

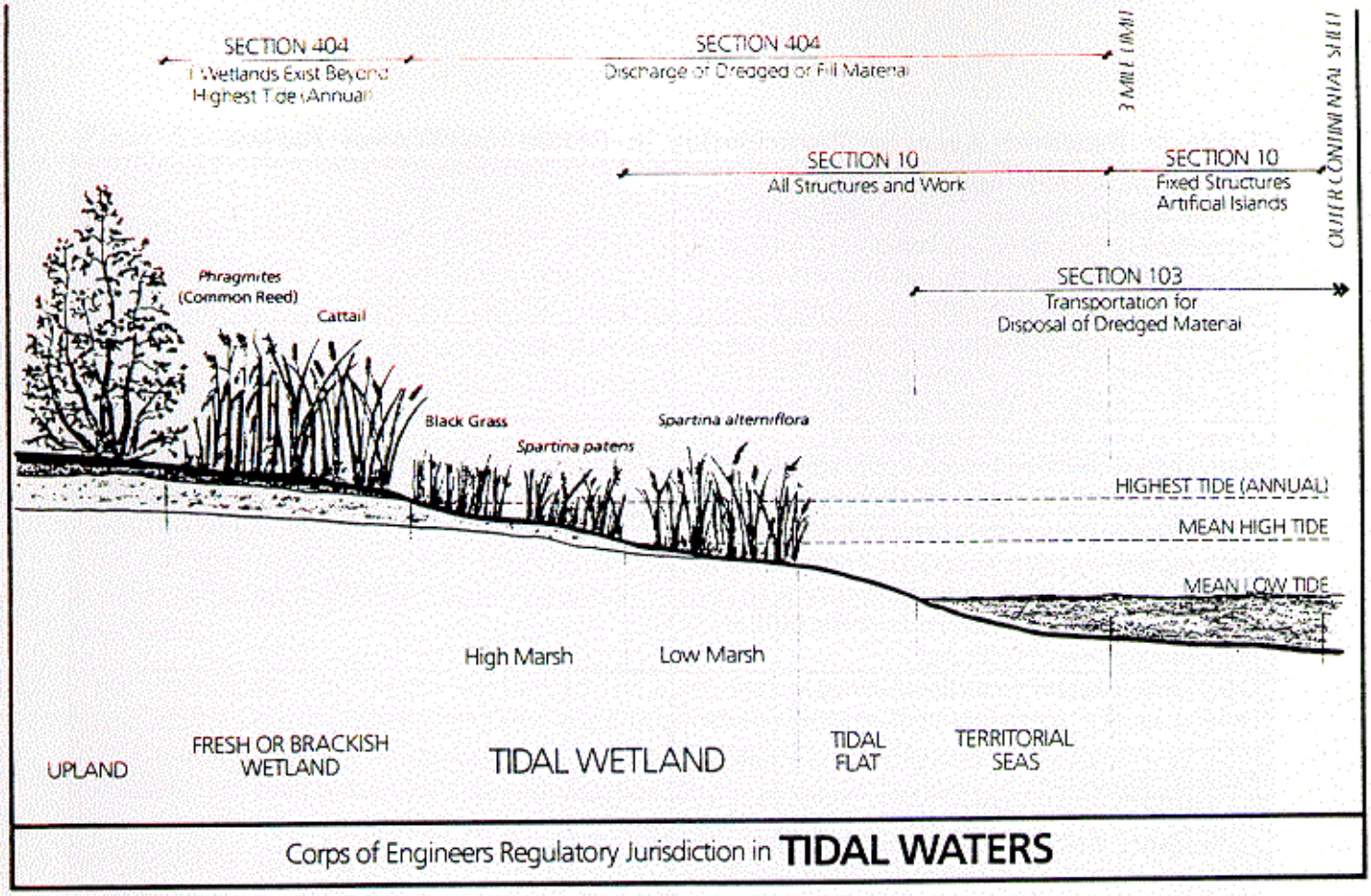
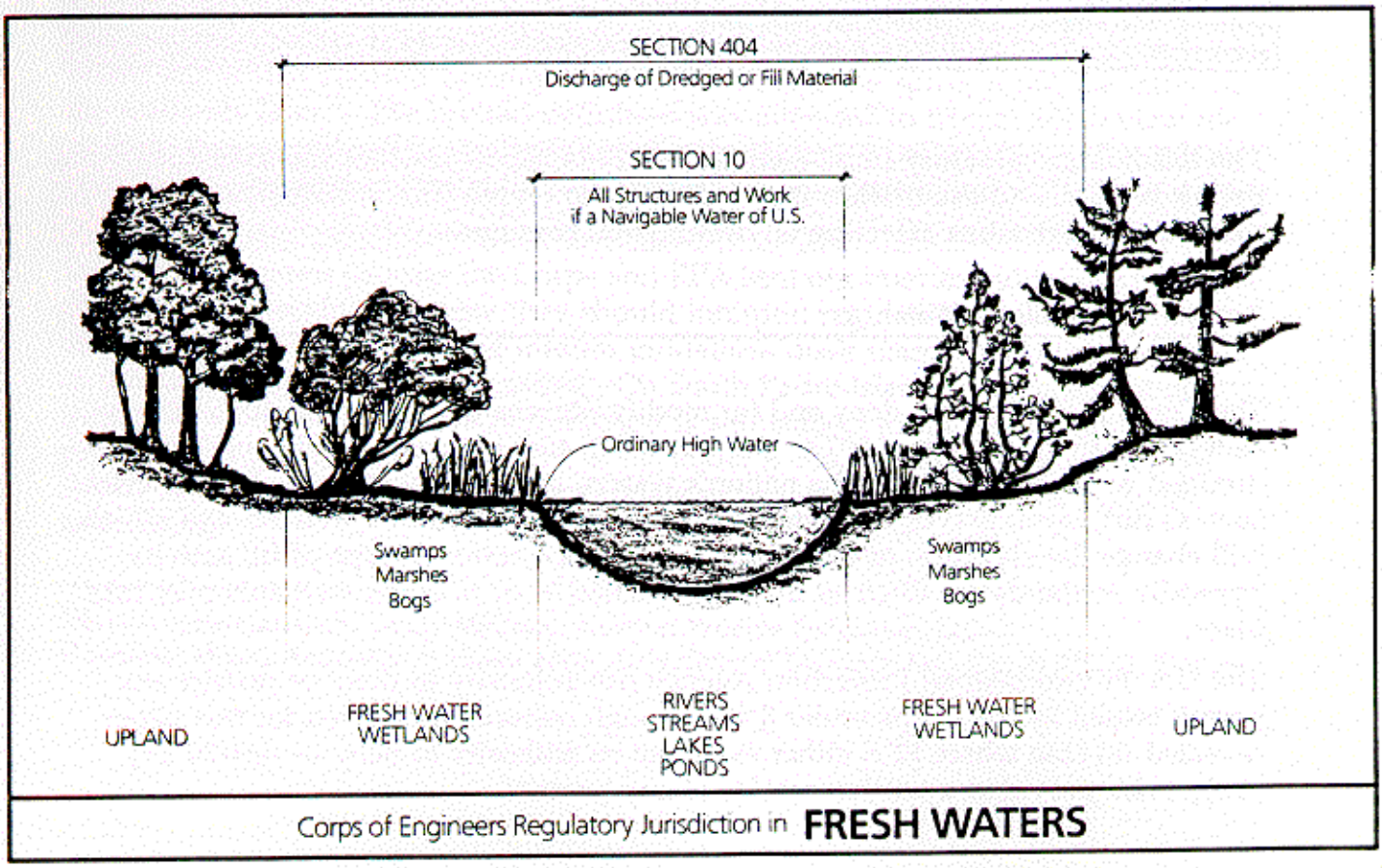

SECTION 404
Wetlands Exist Beyond Highest Tide (Annual)
SECTION 404
Discharge of Dredged or Fill Material
3 MILE LIMIT
OUTER CONTINENTAL SHELF
SECTION 10
All Structures and Work
SECTION 10
Fixed Structures
Artificial Islands
SECTION 103
Transportation for
Disposal of Dredged Material
Phragmites
(Common Reed)
Cattail
Black Grass
Spartina patens
Spartina alterniflora
HIGHEST TIDE (ANNUAL)
MEAN HIGH TIDE
MEAN LOW TIDE
High Marsh
Low Marsh
UPLAND
FRESH OR BRACKISH
WETLAND
TIDAL WETLAND
TIDAL
FLAT
TERRITORIAL
SEAS
Corps of Engineers Regulatory Jurisdiction in TIDAL WATERS

**Figure 3**


SECTION 404
Discharge of Dredged or Fill Material
SECTION 10
All Structures and Work
if a Navigable Water of U.S.
Ordinary High Water
Swamps
Marshes
Bogs
Swamps
Marshes
Bogs
UPLAND
FRESH WATER
WETLANDS
RIVERS
STREAMS
LAKES
PONDS
FRESH WATER
WETLANDS
UPLAND
Corps of Engineers Regulatory Jurisdiction in FRESH WATERS

prior converted croplands and the placement of pilings; those provisions remain in full force...".

Despite this fact, on South Padre Island the Corps still does not regulate the construction of private dwellings on pilings in Section 404 areas, and has made special allowances for commercial facilities in 404 areas. While the Corps does require a permit for commercial development in 404 areas currently, this had not been the case in the past. Previously, the Corps determined that pile-supported commercial facilities would not be regulated if they were constructed eight feet above the wetland surface. This determination was based on their belief that, due to the height of the structure, impacts to the wetland would not be significant and therefore a permit would not be required from their agency. However, as the previous sections describe, shading of light from algal, mud and sand flats does have a detrimental effect on those wetlands.

### *Section 401 - Clean Water Act*

Under Section 401 (§ 401), states are given the authority to review federal licenses and permits that may result in the discharge of materials into wetlands of the state to ensure that the discharge will not cause a violation of state surface water quality standards. All projects requiring the federal 404 permit for dredge or discharge of fill also require 401 certification. If 401 certification is denied, the Corps cannot issue a 404 permit.

In 1995, recognizing a need for the state to take a more active role in protecting water resources, TNRCC revised their rules relative to the 401 program and made a commitment to conduct technical site reviews prior to 401 certification.[14] Shortly after, TNRCC began doing what the Corps should have been doing all along - denying certification for projects which were not water-dependent and which had "practical alternatives". An example of a practical alternative would be the availability of an upland site where the project might be constructed instead.[15] It is entirely within the authority of the agency and certainly their duty to adhere to these guidelines, especially in the absence of Corps leadership in protecting state waters.

In the interest of assisting staff and the regulated comunity to better understand the 401 program, the agency produced a draft guidance document in July 1998 outlining the § 401 certification procedure.[16] The document sets forth the basic goals of the program and includes definitions of terms. The regulatory guidelines, for example, define "impacts" to include cumulative and secondary impacts - secondary being those which can affect a wetland indirectly through cutting off an upstream source

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[14] Verbal communication, Mark Fisher, TNRCC

[15] 30 TAC, Chapter 279; see also A Regulatory Guidance Document for Implementation of Texas Water Quality Certification Rules (Draft) TNRCC, July 1998

[16] Verbal communication, Mark Fisher, TNRCC

of water. Other goals of the review include achieving no net loss of wetlands, maintaining the "chemical, physical and biological integrity of waters in the state" and avoiding to the extent possible adverse impacts to aquatic ecosystems.

While the technical review process had been active since 1995, this new draft document evoked some concern among the regulated community. Responding to pressure from within that community, TNRCC leadership decided to form an ad-hoc working group to invite additional comments on the document before it becomes finalized (please see letter on following page from past TNRCC Chair Barry McBee). The group includes representatives for the public interest as well as the regulated community, but a legitimate concern exists that the 401 program might be undermined should the group decide to limit TNRCC authority relative to the 401 program.

One of the complaints heard frequently from the regulated community is that the TNRCC, through implementation of the § 401 program, is actually duplicating the role that the Corps plays in implementing the § 404 program. While it is also the Corps' general policy to avoid duplicating the role played by other regulatory agencies, the absence of Corps leadership in protecting wetlands clearly shows that the TNRCC has a vital role to play in ensuring that state water quality is not degraded. **Based on the cases reviewed for this report, the 401 review and certification process, when exercised, provides the only real protection for wetlands in the state that come under Corps review for Section 404.** If TNRCC is no longer able to conduct the technical review and legitimately exert its authority through the permitting process, and barring significant philosophical changes in the Corps, there is no question that wetlands in Texas will suffer.

### *Section 10*

Section 10 (§ 10) of the Rivers and Harbors Act of 1899 deals with construction of docks, piers or other over-water structures affecting wetlands and navigable U.S. waters. Administration of Section 10 also falls within Corps jurisdiction.

### *Endangered Species Act*

Under the Endangered Species Act of 1973 (ESA), FWS may list species as "threatened" or "endangered" and can designate "critical habitats" necessary to protect those species. The ESA prohibits the unauthorized take, sale, posession or transport of listed species. FWS is authorized to assess fines and criminal penalties if the law is violated. Under Section 7 of the ESA, federal agencies are required to insure that actions funded, carried out or otherwise authorized by them does not jeopardize the existence of a listed species or its critical habitat.

Figure 4



# TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

October 13, 1998

Mr. Kerry Whelan
Greater Houston Partnership
c/o Houston Industries, Inc.
12301 Kurland Drive
Houston, TX 77034

Dear Mr. Whelan:

On behalf of the Commissioners, let me thank you for serving on the agency's Ad Hoc Work Group to address the regulatory guidance document for implementing our 401 water quality certification rules.

You have been provided a copy of the materials presented to the commission at a recent work session where we endorsed staff's recommendation to form the work group. I wanted to provide you a summary of the Commissioners' discussion at that work session also The Commissioners support the role the agency must play under Section 401 of the Clean Water Act. As the agency fulfills its responsibility, as embodied in the regulatory guidance document, we want to develop policies and approaches to achieve two principal goals: enhancing the use of mitigation where there are impacts on wetlands, with a special emphasis on large-scale institutional wetlands projects; and ensuring that the agency's decisions do not result in preservation of small, isolated wetlands that eventually lose their ecological value due to a mandate or preference to avoid wetlands impacts.

We also discussed that the Texas Parks & Wildlife Department should serve the central role in addressing wetlands from an ecological and wildlife habitat perspective and that we should follow that agency's recommendations whenever possible.

Again, the Commissioners appreciate your advice and assistance to the agency and look forward to monitoring and assessing the work group's deliberations. If you would like to discuss these issues further, please feel free to give me a call at (512) 239-5505.

Sincerely,

Barry R. McBee
Chairman



P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000 • Internet address: www.tnrcc.state.tx.us

### *National Environmental Policy Act (NEPA) - 1969*

This act requires that an environmental assessment (EA) or impact statement (EIS) be prepared as part of the review and approval process by federal agencies of major actions they are authorizing, carrying out or funding which might significantly affect the environment. The EA or EIS is usually part of a lengthy process involving the coordination of a number of federal, state and local agencies. An EIS must also include a public comment period before the final report is issued. Smaller scale projects which involve individual permits do not, under the Corps interpretation, usually require an EA or EIS. The Corps considers the permit review process, evaluation of comments, and the issuance of a Statement-of-Findings with the issued permit as an environmental assesment.

### *CZMA,Texas Coastal Management Program & Coastal Coordinating Council*

The Coastal Zone Management Act of 1972 (CZMA) allows states that develop coastal management programs to apply for federal funding for projects that protect and improve coastal natural resources. In the state of Texas, TGLO is the primary agency responsible for writing and implementing a state Coastal Management Plan (CMP). Texas received federal approval of its plan in January 1997. Under the CZMA, federal permits issued within the coastal management boundary (as defined in the Final Environmental Impact Statement for the CMP) must also be consistent with state management plans. On its face, the CZMA gives Texas more power to manage its own coastal resources and allows for the state to impose stricter guidelines for development along the coast.

### *Nationwide permits*

Projects which fall below certain impact thresholds as defined by the Corps are eligible for fast-track permitting, known as Nationwide Permits, or NWP's. The Clean Water Network calls these "rubber-stamp permits" designed to make permitting "quick and easy". The Network reports that in 1995 alone the Corps issued 130,000 Nationwide permits. The NWP program can have a substantial impact on wetlands if viewed cumulatively. For example, Corps guidelines state that projects may be eligible for NWP 18 if they involve discharges less than 25 cubic yards which would not cause the loss of more than 0.1 acres of wetlands. Even given half that amount in the 130,000 cases permitted, that's an additional 7,000 acres of wetlands lost in one year, and this doesn't count the thousands of other acres lost through the general permitting process.

## III. The Problem on South Padre Island

Construction activities on South Padre Island impact habitat in many ways. Private homes and businesses with decks, piers and docks built on pilings over water cut off sunlight to near-shore seagrass meadows, blocking their growth.[17] Structures built on or over mud and algal flats that are periodically inundated by tides affect many species of shorebirds by virtually eliminating their food supply - the variety of aquatic invertebrates, larva and tiny crustaceans found in the flats. Decks and other pile-supported structures built over mangroves and emergent marshes shade out light to the vegetation, which eventually results in the loss of the vegetation and subsequently the wildlife species - birds, fish, and shellfish - associated with that vegetation.

The area comprising the town of South Padre Island, not counting Isla Blanca County Park and including the distance from the termination of the Port Isabel Causeway to Andy Bowie park, is roughly five miles long and for that entire distance equal to or less than 3,000 feet wide. Contained within that small area, seagrass beds, oysters, tidal sloughs, mangroves, other emergent vegetation, mudflats algal flats, sand flats, and isolated wetlands are all represented. But these valuable habitats are threatened by commercial and private development.

In preparing this report, TCPS staff reviewed permit files in the Corps' Galveston District office for projects on South Padre Island within the last several years. Of the 25 or so cases reviewed for this report, only one permit application was denied - a proposed helicopter landing pad in the Laguna Madre.

In only two years' time, in fact, the Corps has issued permits authorizing development that would directly impact at least 56,000 square feet of seagrasses, mudflats and other wetland habitats. A brief description of some of

[17]Christopher Onuf: Seagrasses, Dredging and Light in Laguna Madre, Texas, U.S.A., Estuarine, Coastal and Shelf Science (1994) 39, 75-91

those cases follows. Each illustrates the areas in which the Corps is typically lax:

1. Evaluating cumulative impacts;
2. Permitting non-water dependent structures which shade mangroves and other marsh vegetation and block water movement in tidal sloughs;
3. Issuing after-the-fact permits instead of requiring restoration of the habitat;
4. Not requiring or enforcing mitigation for a variety of proejcts they have authorized.

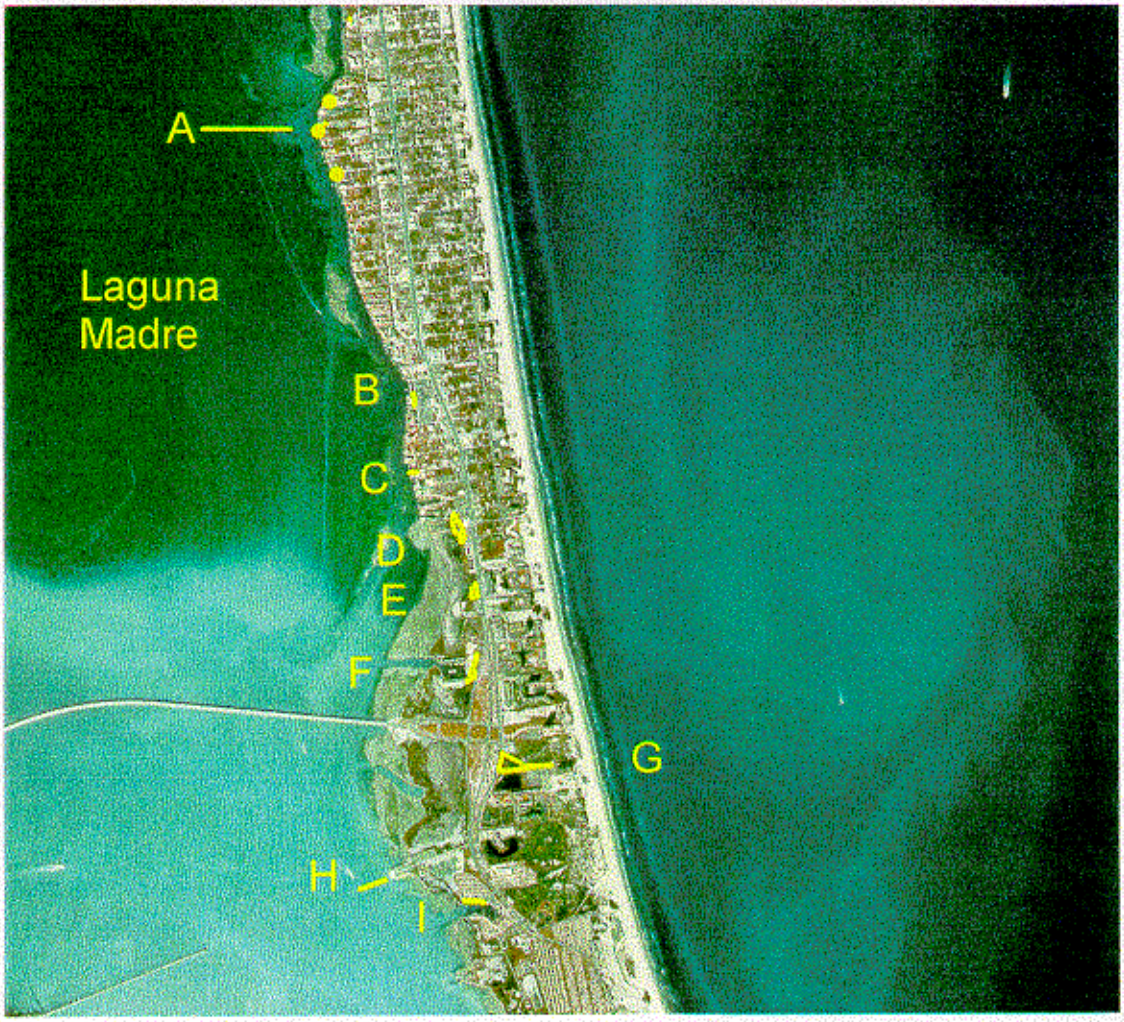
The concept of mitigation, or trying to re-build natural habitat in one area after it has been destroyed in another, is from the outset a questionable practice, even more so if it repeatedly fails. The effectiveness of mitigation in replacing the functions and values of the lost natural wetland has been called into question nationwide.

While some of the cases reviewed for this report gave specific plans for mitigation projects, and permits were issued on the basis of those plans, there is no physical evidence that any of those projects were successful. The Corps recognizes its own weaknesses in following up and determining whether applicants have complied with the mitigation requirements. At a November 3, 1998 meeting on South Padre Island, Marcos de la Rosa, then Chief of the Corps' Galveston District Regulatory Branch, admitted that mitigation approved and regulated by the Corps own office has not been successful, saying "the majority of the time it's a failure". The mystery is why the agency does not try to remedy the situation. Mr. de la Rosa blamed "lack of sufficient staff and funds". However, the Corps continues to issue permits for development to proceed in wetlands knowing that staffing and funding limitations mean it cannot subsequently follow up or enforce the required mitigation, much less determine if the reconstructed wetland is functionally equivalent to the wetland that was destroyed.

It should be noted that for each and every project reviewed, in no case are the true cumulative impacts listed. Cumulative impacts may result from a single permit, or from various permitted projects which all have contributed to the overall problem. Typical language in the "public interest review factors" considered as part of the Public Notices states "The decision to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the important resources." Simply stating that the decision will consider the cumulative impacts should not substitute for openly evaluating the impacts themselves, something the Corps has consistently refused to do on South Padre Island.

Figure 5

# *Examples of Permitted or Proposed Sites with Potential Habitat Impact on South Padre Island*




Primary issues associated with project (some avoided through voluntary modification by applicant)

| | | |
|---|---|---|
| A | Privately Owned Properties | Mangrove Losses |
| B | Louie's Backyard | Non water-dependent structure, shading |
| C | Casagrande | Permit violation, seagrass impacts |
| D | F.N.G. Ventures | Potential Endangered species habitat |
| E | T-Shirt Shop | Permit violation, wetland fill |
| F | Boardwalk Condominiums | Cumulative Impacts to seagrasses |
| G | Schlitterbaun | Wetland fill |
| H | Sea Ranch Pier | Potential seagrass shading, modified |
| I | Sea Ranch Restaurant | Non water-dependent structure |

**Case Examples**

*Boardwalk Condominiums: cumulative impacts.*

The permit issued in this case was to maintenance dredge a channel that received its initial permit in 1975. The developer dredged a channel and basin and constructed concrete bulkheads around the area for a private condominium boat marina, which originally impacted around 126,000 ft$^2$ of submerged grasses and mangroves. The suspension of sediments in the water from dredging can affect seagrasses by cutting off light needed for photosynthesis, thus the potential to impact many thousands of square feet. This illustrates the compounding effect of development projects in sensitive areas - habitat becomes impacted and degraded further and further until there is nothing left, but each activity by itself the Corps deems to minimally affect habitat. The photo shows additional impacts from this building's extension over vegetated flats.

*Louie's Backyard: After-the-fact permit, non-water dependent,cumulative impacts.*

Construction on this project had taken place illegally and was already completed some time before anyone noticed. Over 5,400 ft$^2$ of seagrass beds were most likely destroyed by the original construction. The Corps' "Unauthorized Activity Statement of Findings"[18] acknowledged the shading of the structure might have adversely impacted any submerged seagrass beds that were there originally. The Corps then throws in a confusing qualifier, by claiming that "the shading effect may serve to provide a resting and feeding area for various marine organisms by providing protection for prey species which in turn attract predator species." This statement has no basis in fact and is contrary to scientific research, which shows that the seagrasses are what provide food and resting spots for marine organisms, not shading. The only conclusion one can draw from reading this statement is that the Corps is editorializing on behalf of the violator, though Corps guidelines specifically state "The Corps is neither a proponent nor opponent of any permit proposal."[19]

Louie's Backyard received an after-the-fact permit under Section 10 and no fine was imposed. Over a period of years, the owners even applied for and received subsequent additional amendments allowing more construction at the site for non-water dependent activities such as a dance floor and restaurant. FWS and TPWD attempted in their comments on these later revisions to the permit to have the construction reviewed under Section 404 as well, mentioning the concern that extra

[18] Case I-1285

[19] 33 CFR 320.1 (a) (4)

pilings needed to support the expanded structure would function as a fill by significantly degrading underlying habitat. TPWD comments also pointed out another problem with bayside establishments; "the accretion and reduced water circulation, in conjunction with the ...accumulation of trash and debris under the structures, all contribute to the overall water quality degradation in the project area."

In the permit issued for Louie's, the Corps states "the water dependency test is required for fill operations in special aquatic sites. This proposal requires no fill in special aquatic sites." First of all, the Corps' chooses this singular test of water dependency to apply, which is a description given under Section 404: the project was not being reviewed under Section 404. However, the Corps chose to totally ignore the tests available under Section 10 which it also must apply, such as whether there are practical alternatives for the project. The FWS refers to the practical alternatives test repeatedly in its comments on the case, and cites a legal case[20] where the final decision "made it clear that the Corps can deny Section 10 permits for ecological reasons."

*Solymar - Casagrande Restaurant: Non-water dependent, permit violation, after the fact permit, lack of successful mitigation record.*

Construction had begun on the applicants' overwater restaurant deck - a non water-dependent structure, while the permit application was still under evaluation and before a permit had been issued. The Corps' Site Investigation Sheet summary reads: "Applicant installed 14 pilings and discharged fill into the Laguna Madre. Applicant had applied for permit, however, started work without permit." Furthermore, a communique between Corps personnel indicated that "fill and trash (was) being deposited in the Laguna Madre". Though this was in clear violation of Section 404, the Corps, after an initial Cease-and-Desist order, allowed the applicant to continue the project and apply for an after-the-fact permit. The applicant proposed mitigation: planting sea grasses on the perimeter, since TPWD and FWS site investigations revealed seagrass beds that were now buried under the discharge from the construction.

There is no current written record of the success or failure of the mitigation. The restaurant is open and in operation, and a new consultant hired to deal with the mitigation project and after-the-fact permit process.

It is worth noting that the agent representing Solymar at the time of the violation was also representing another client involved in a similar violation at about the same time - this case is outlined below. This agent continues to operate and represent clients. Until the Corps seriously discourages this type of activity by imposing fines on the violator, further infractions will very likely result.

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[20] Zabel v. Tabb, 430 F. 2d 199 (5th Cir. 1970)

*Private homes and decks: Non-water dependent, cumulative impacts.*

One of the most damaging types of cumulative and incremental impacts of all may be the impacts associated with the numerous pile-supported private homes that are going up over mangroves and tidal sloughs on South Padre Island. In one particular case, the Corps issued a permit over the objections of FWS, NMFS, and TPWD; all recommended denial because of impacts to a mangrove wetland that would most likely result. The case prompted TPWD to state: "Due to developmental pressures on South Padre Island, vegetated and nonvegetated intertidal habitat is rapidly disappearing. Department staff has provided numerous comments regarding impacts associated with non-regulated[21] pile-supported houses which are built over wetlands."

TNRCC quotes the Corps own guidelines under §404 in applying the water dependency test: "activities which are not water dependent are presumed to have practicable alternatives available." Therefore, if a project does not require water in order to exist it must prove there is no practicable alternative. The Corps, characteristically, refers to the importance of allowing "flexibility" to private property owners in developing land. However, in repeatedly acceding to this flexibility, the Corps ignores its primary responsibility: to enforce wetlands protection through regulation.

## *IV. Case Studies*

Following are two more detailed case studies which clearly document 1) how the regulatory guidelines listed above are interpreted by the Corps to favor development over wetland protection and 2) the lack of any real Corps enforcement or mitigation for wetlands losses.

*F.N.G. #2 Ventures - Piping plover Section 7 consultation case*

This case is particluarly important for several reasons. It is the first to involve a Section 7 consultation for the piping plover in this region. Second, it demonstrates the Corps' reluctance to accept the views and authority of another federal agency. Third, the case finally led FWS to conduct its own assessment of cumulative impacts on piping plover habitat from past Corps permitted projects - something that the Corps is supposed to do as a matter of course and for each project it reviews, but which it consistently fails and indeed outright refuses to do.

### History

The applicant proposed to dredge almost 15,000 cubic yards from the bay

[21] Non-regulated refers to those structures that do not fall under either §10 or §404.

of the Laguna for a boat basin and entrance channel (to be used by condo dwellers) and construct 500 feet of bulkhead for a commercial venture, to be called "Tortuga Village". The Corps presented the project for review only under Section 10. The original permit application, issued to International Bank of Brownsville in 1987, expired before any construction took place, and a renewal application came up for review in 1991. In the interim, new information about the piping plover caused FWS to scrutinize this project carefully. This species is listed as threatened throughout its wintering range in Texas. The piping plover uses unvegetated algal, sand and mudflats, such as those on South Padre Island, for foraging and roosting.

The permit application was transferred to Troy Giles of F.N.G. #2 Ventures in 1993 and received final approval in July 1997. As planned, the project would impact 4,460 $ft^2$ of bay bottom, 840 $ft^2$ of seagrasses, 100 $ft^2$ of smooth cordgrass (*Spartina alteniflora)* 12,600 $ft^2$ of unvegetated mudflat, and 17,000 $ft^2$ of vegetated flats.

The original mitigation proposed by the applicant through his agent, Espey, Huston and Associates, was to plant black mangrove and smooth cordgrass along the edge of the basin and scrape down to tidal flat level a tract of adjacent land in order to re-create the flats destroyed. Comments received from National Audubon Society (NAS) FWS, Frontera Audubon Society (FAS), and TPWD related to concerns over impacts to piping plover habitat from destruction of the flats, and the innappropriateness of planting mangrove and cordgrass when past mitigation efforts of this type had been largely unsuccessful. The applicant modified the application to include only cordgrass plantings and agreed to conduct a survey of the site for piping plover activity.

The survey, conducted by Espey, Huston & Associates and completed in May 1992, revealed piping plovers to be in the area, along with 22 other species of shorebirds, notably large numbers of western sandpipers, semi-palmated plovers, black-bellied plovers, three species of terns, three species of gulls, black skimmers and oystercatchers. Though the piping plovers did not appear to be foraging when sighted, the habitat type and related species present indicated the site to have high potential for additional piping plover use.

FWS recommended that the Corps intitiate formal Section 7 Consultation and that an extended nine-month piping plover survey be conducted in order to gather information about use pf the area by the plover . The applicant balked and the Corps attempted to push the permit through. After several letters from FWS explaining the importance of their legal mandate to protect listed species and their habitat, along with the threat of a suit from the National Audubon Society, the Corps finally agreed to postpone a decision until formal consultation was completed.

### Incidental take

Under Section 7 of the ESA, if FWS believes a project may have impacts or result in a "take" of a listed species or its habitat as described above, it may require that an agency-approved wildlife survey be conducted prior to project approval or denial that assesses

the potential for damage to that species - in this case the piping plover. Under Section 7, the "incidental take" of a species may be authorized, an action that is prohibited elsewhere in the ESA. The take is authorized through a lengthy consultation process which results in a takings statement. In the statement, FWS outlines the survey results and determines what Reasonable and Prudent Measures (R&P) the applicant should undertake that will minimize damage to the species and its habitat. In effect, the takings statement establishes an acceptable threshold that will protect the applicant from being penalized under Section 9 of the ESA. The FWS also lists the Terms and Conditions for implementing the R&P measures. The issuance of the takings statement is conditional upon meeting these measures - they are considered mandatory. After the formal consultation for this project was completed, FWS issued a takings statement which authorized the "taking of 0.834 acres of potential piping plover habitat".

### Differing definitions of "cumulative"

The F.N.G. #2 Venture case further revealed the extent to which Corps and FWS definitions of cumulative impacts differ. As shown, the Corps regularly assesses each individual permit in isolation and determines impacts based on the amount of habitat affected for only that project. However, were the Corps to consider its own past authorizations for all the projects permitted along the Laguna Madre shoreline of South Padre Island, those impacts would be much greater.

The Corps considers these projects as being "within the public interest" based on the reasoning that since development pressures in the area are likely to continue, and since the Corps has already permitted such activities in the past, any curtailing of permit authorizations for similar projects would be considered "arbitrary and capricious".

This reasoning is flawed. As shown, the Corps has numerous laws and regulations at its disposal for halting environmentally-damaging projects, and is obligated to use them for enforcing the protection of wetlands. In fact, each Statement of Findings the Corps issues for a permit has a heading specifically titled "Cumulative Impacts", but in no case does the Corps give any information on the total amount of seagrasses, mudflats, mangroves, etc that have been shaded, dredged, filled or otherwise destroyed on South Padre Island to the present time.

In the Biological Opinion issued as part of the International Bank of Brownsville consultation, FWS recommended that the Corps conduct a cumulative impacts analysis prior to formal Section 7 consultation, since they would have to conduct one anyway once the consultation process began. The cumulative impacts definition includes all past, present, and future actions and falls under what the FWS refers to as "cumulative jeopardy". FWS argued that since the Corps had failed to complete cumulative analyses each time it conducted a permit review, it would now have to wait for a complete study of the impacts to piping plover habitats the Galveston district had

permitted along the entire Texas coast in addition to the study of individual impacts on South Padre Island. The Corps refused to such an extensive survey, narrowing the boundaries to only South Padre Island, but still did not provide raw data on acreage or habitat impacted, leaving this responsibility up to FWS.

The FWS Biological Opinion also assessed all Corps permitted actions on the bayside of South Padre Island for damage to piping plover habitat since the species was listed in 1985. The review included 43 actions, permitted between January 1986 and April 1993. Of the 43 actions permitted, fourteen appeared to involve "the direct loss of piping plover habitat" totalling 78 hectares. In only one of the 43 projects, however, were piping plovers mentioned during the permit review, and in that case the project did not actually involve piping plover habitat.

In the Terms and Conditions written in the Biological Opinion, FWS directed both the applicant and the Corps to undertake certain measures to minimize impacts on piping plovers and their habitat. The applicant agreed to most of the conditions, but the Corps still balked at conducting the cumulative impacts analysis for each public notice issued.

FWS directed the Corps to: 1) survey all sites permitted since 1985 where construction had yet to be completed, 2) initiate consultation if the surveys showed those sites to be plover roost sites, and 3) for all future projects where piping plover habitat might be lost, the Corps should list in the public record the total number of acres of piping plover habitat lost that the Corps had authorized since the time of its listing.

The Corps refused to conduct any additional surveys on prior authorized permit actions, stating that of the projects mentioned, nine had expired, three were completed and two were under coordination currently. They also stated they would list potential piping plover habitat loss in acres for the public record for each individual case, but that it was the responsibility of FWS to tally these losses. Once again, the Corps puts the burden of documenting cumulative impacts on the FWS, even though NEPA requires that federal agencies assess their actions in terms of cumulative impacts to the environment. In each Public Notice and Statement of Findings that the Corps issues it should list cumulative impacts, but, for some reason, the Corps of Engineers seems to feel they can categorically ignore the definition of "cumulative".

### The regulated community bears the burden

Another problem with the Corps' approach is that the regulated community can sometimes become the victim of insufficient information. Without an accounting of the potential cumulative effects and/or impacts a proposed project might have on the ecosystem, even the applicant is unaware of why his project may be problematic for wildlife. By this time it would seem fairly obvious that seagrasses, mudflats, and mangroves will be red flags to the resource agencies. However, in virtually every permit application reviewed for this report, the Public Notice lists "minimal" or no potential

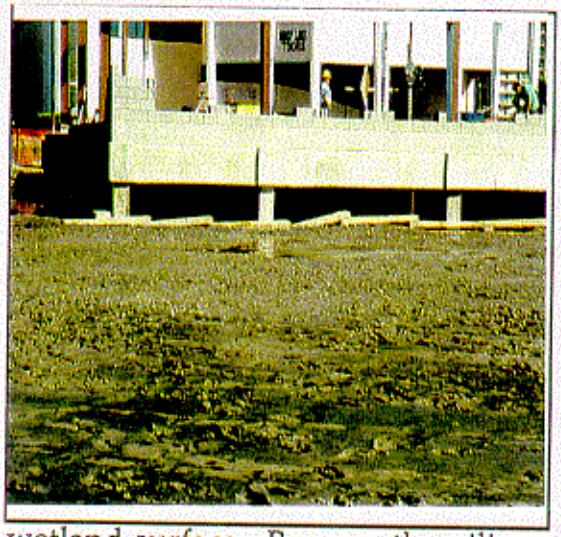
*Parade T-Shirt Shop - No compensation for wetlands loss*

The T-shirt shop in this case was to be part of a larger commercial development. While the Public Notice for the entire project was under review, the Corps made a determination that the T-shirt shop could be constructed independently of the rest of the project, and without a permit. They made this determination based on the original design specifications which indicated the building it would be constructed on pilings eight feet above the surface and therefore not constitute fill, even though 4,600 square feet of it was to be constructed over a wetland.

While it was still being reviewed, the TNRCC indicated in July 1996 that the project was not acceptable as presented and would be denied §401 certification. FWS cited concerns that the habitat, already increasingly a rare type on South Padre, had good piping plover potential and recommended a section 7 consultation. Despite both the TNRCC letter and FWS concerns, the Corps decided the project could proceed without a permit.

After construction on the T-shirt shop had begun a local Sierra Club member alerted the Corps that a cofferdam had been constructed and that water and sediment were being pumped back into the Laguna Madre - an action that normally would require a 404 permit. Though the Corps responded quickly with inspection and notice to the contractor, no punitive action was taken.

Some time later, the Corps was again called to the site and discovered that the floor of the building, though on pilings, was only two feet above the



wetland surface. Because the pilings were jetted into the bay bottom and the sediment from that activity displaced onto nearby wetlands, the Corps now considered this a "fill", and subject to regulation. It is unclear why the elevation of the floor itself would have any bearing on whether or not the construction activity would qualitfy as fill, considering that the installation of the pilings would have to take place regardless of the building's elevation.

At any rate, the Corps issued a Cease and Desist order to the owners and contractor. What ensued amounts to finger-pointing and denials of responsibility on all sides. It is clear from the correspondence that the T-shirt shop owners were unaware of the regulations and unprepared for the flurry of official notices that followed, even though a letter from the contractor to the Corps indicates that

the owners had hired a consultant "for the purpose of obtaining permits from the Corps". The consultant claimed that the Corps approved the project based on the drawings he presented them; the Corps claimed they saw drawings that indicated the floor would be at a higher elevation.

This would indicate that the "consultant" misrepresented himself to the owners as someone capable of obtaining the necessary permits and reviewing designs accordingly. At the very least, he did not thoroughly research the regulations he was hired to obtain permits for and at worst, deliberately misled both his clients and the Corps. As mentioned in the previous section, this same agent was involved in the Solymar Section 404 violation case almost simultaneously.

Other real estate agents on the Island have expressed deep frustration with the inherent unfairness this type of situation creates. One agent summed it up this way: "I've seen areas with wetlands on them that I wouldn't even consider trying to sell to somebody, and then construction happens and an after-the-fact permit gets issued anyway. It all gets down to a level playing field - laws should apply to everybody. If one guy gets away with it and another doesn't, it leaves a bad taste in your mouth, and the finger points back to those who are supposed to enforce the laws. This makes it tougher for the people who play fair."

Remarkably, even given these situations, the Corps imposed no fine on the agent or applicant, decided to lift the Cease and Desist order, and construction of the T-shirt shop was completed. Thus, another 4,600 square feet of tidally-influenced and partially vegetated mudflat is lost. The contractor proposed as mitigation an educational seminar for other developers and contractors regarding Corps regulatory procedure, not a bad idea in and of itself but not a true wetland mitigation. The mitigation to date is still pending.

In comments submitted for the after-the-fact permit, FWS repeated their previous recommendation that cumulative impacts to piping plover habitat be listed for each Public Notice. TPWD also listed concerns regarding piping plover habitat, and for the loss of the habitat value; "Long term shading effects will result in loss of algal habitat while sulfur-producing bacteria will increase in numbers." TNRCC commented: "Department staff ... maintain the position that even if the building were constructed with a minimal clearance of eight feet above the algal flat, adverse impacts will occur due to reduced light penetration, altered hydrology, and accretion..." and NMFS cited adverse impacts to wetland vegetation and organisms like marine worms and crustaceans as important elements of the aquatic food chain.

## V. Conclusion

TPWD and FWS report that pre-permit issuance coordination with the Corps field office in Corpus Christi is good and regular meetings help all parties involved to work more efficiently together. However, positive, profound change in Corps ideology must happen institutionally before real results will be apparent. Some of the projects on South Padre Island which were permitted by the Corps do contain recommendations which were provided by the resource agencies. Although these projects were modified to avoid and/or minimize impacts to the resources, the need for improvement is obvious. Based on the current confusing state of the Final Excavation (Tulloch) Rule, recent attempts by special interest groups to undermine the 401 certification process, and the amount of development the Corps has already permitted, the changes will be extremely slow in coming. Meanwhile, wetlands and valuable coastal habitats continue to disappear piece by piece.

### *Pending Cases*

There are several cases up for review currently involving construction in wetlands on South Padre Island which promise to be equally damaging if permitted. A brief synopsis of each follows:

- A non water-dependent private home proposed for construction which would require filling and destroying 2,450 square feet of black mangrove marsh. FWS comments: "Black mangroves in the Lower Laguna Madre are at the northern limits of their range in Texas, and as such should be afforded special protection because they are a unique, limited habitat type."

- A commercial gas station and convenience store operation proposes to locate immediately adjacent to the Parade t-shirt shop, filling almost three acres of an extension of the same wetland destroyed by the shop. This is the second time this commercial development has been submitted for review. If this project actually receives a permit it will send a loud and clear message that practically any development, no matter how damaging or injurious to habitat, is just fine with the Corps of Engineers. FWS comments: 1) recommend formal consultation to assess the piping plover habitat potential; 2) note that on a previous visit to the site least terns, protected under the Migratory Bird Treaty Act, were nesting in the the area, and 3) on three separate site visits, including during the drier summer months, the area was inundated with water, questioning the applicants' contention that the area was "underwater only at extremely high tides".

- An amendment to a permit that would fill and bulkhead one-third of an acre of the Laguna Madre to construct three boathouses, impacting marsh, oyster beds, seagrasses, mangroves and unvegetated flats. FWS comments: "Under current plans, the construction...would impact varying amounts of every important

habitat type found in the lower Laguna Madre." Ironically, the original permit authorized included designs for reasonable residential construction which would not have involved filling these sensitive habitat types.

***Nature-based tourism initiatives***

In recent years, many coastal communities have begun to realize the benefits of habitat protection for bringing in tourism dollars and maintaining a more stable, diverse economic base. Nearby Laguna Atascosa Refuge, for example, receives over 100,000 visitors annually, 97% from outside the area. Many, if not most of these visitors are also traveling to other birding spots in the valley - including South Padre Island - primarily during the months of November through May to view wintering and migratory birds.

Several initiatives are underway which may greatly increase the influx of birding tourists to the area - including the Texas Parks & Wildlife's plans for a World Birding Center complex and Texas Coastal Birding Trail. Efforts by the Valley Land Fund and Rio Grande Valley Bird Observatory to purchase and protect the remaining vegetated lots on the island are evidence of the value these lands hold for bird-watchers and the neotropical migratory species using those habitats.

Plans by the Fish & Wildlife Service to purchase land north of the end of highway 100 will protect undevelopable lands where large numbers of migratory and wintering birds forage and roost. It is not possible for large numbers of tourists to access the northern portion of the island, given limited infrastructure and resources for management of protected areas. For this reason, the few remaining spots on the populated part of South Padre which support neotropical migrant and shorebird habitat will become more valuable to increasing numbers of birding tourists. In its approach to inter-agency coordination and during the decision-making process, the Corps needs to recognize these values as important factors to be included in the larger public interest.

***Recommendations***

The following actions would ensure better protection for wetlands on South Padre Island and statewide. Many of these recommendations would require inter-agency coordination to be successful, and not all are the sole responsibility of the Corps. However, the responsibility to ensure that construction in wetlands is minimized before entire wetland areas are destroyed falls squarely on the Corps' shoulders.

**1. Educate the regulated community**. Regular seminars and workshops on wetlands values and regulations and an overview of agency could be coordinated between the agencies and targeted toward the regulated community and their consultants.

**2. Identify and prioritize areas containing diminishing or critical habitat**. Protecting all remaining habitats within the town of South Padre Island may be an unrealistic expectation. However, maintaining adequate amounts of diversity in habitats - mangroves, tidal sloughs, flats, tidally-influenced wetlands, isolated wetlands,

typical coastal vegetation and marsh - would help to maintain diversity in bird species and productivity in fish and shellfish nurseries in the Laguna Madre.

**3. Take swift action against violators.** Allowing the regulations to be undermined only encourages further infractions. The Corps can use its authority to stop violators through the cease and desist orders and follow up with legal action requiring restoration, fines and appropiate mitigation.

**4. Discontinue allowing pile-supported construction in wetlands.** Private dwellings being constructed over mangroves and tidal sloughs will eventually kill the vegetation. The Corps must put a stop to this type of construction because there are reasonable alternatives available. The only reason construction continues in this manner and agents sell these properties as developable is because the Corps allows them to be developed.

**5. Use after-the-fact permitting with more discretion.** When employed to the extent it is employed by the Galveston District, the after-the-fact permit renders the entire permitting procedure ineffective. There is no point to a regulatory process if a permit is issued even for those who ignore it entirely. The Corps should severely limit the use of this type of permit.

**6. Institutionalize a philosophy of wetlands protection in the Galveston District Regualtory Branch.** As previously mentioned, the Corpus Christi Field Office and local natural resource agencies are now coordinating more extensively during the permit review stage. However, if the permits are still being issued without due consideration of cumulative impacts or the recommendations of the resource agencies because the overall philosophy of the District remains unchanged, this cooperation is meaningless.

**7. Conduct an analysis of cumulative impacts.** One of the single most important things the Corps can do is conduct a thorough analysis of the collective impact all permits issued have had on wetland habitats on South Padre Island. For each new permit application, those collective impacts must be listed, along with the expected impacts from the permit under review. **It is not the responsibility of the U.S. Fish & Wildlife Service to analyze cumulative impacts - it is legislatively under the authority of the Army Corps of Engineers.**